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ind

29) North of Floyd's Fork. Hays Spring.

2 $\frac{2}{3}$ ft clay. Upper Ozgrod.

5 $\frac{1}{2}$ ft Ozgrod limest.

21 ft. Thick Ozgrod clay. Some indurated layers at top.

1 $\frac{1}{2}$ ft. Transition rock See page 8.

15 in. Salmon brown Clinton.

25 ft { Fairly hard just below Clinton.
Madison - weathered to thin bedded
stuff. (No gastropod bed at top)

3 ft More like banded Madison.

8 ft. Clay rock spalling in all directions.

2 $\frac{1}{2}$ ft Soft clay.

(2-3 in. Limestone with

Strophomena planumbona

Streptelasma rusticum

Rhynchotrema capax

The rocks next mentioned consist
chiefly of small limestone rubble. Very
little limestone in hard layers.

5 $\frac{1}{2}$ ft

5 $\frac{1}{2}$ ft

Strophomena planumbona at base

5 $\frac{1}{2}$ ft

Protarea vetusta common

Strophomena planumbona common

11 ft

Protarea vetusta at top

0 —

Streptelasma rusticum = 66 ft
below Clinton.

1 ft.

Soft dark blue clay.

0 ft

Columnaria palli? with corallites
separate at top so as to leave a
separate spitheca.

9 ft.

Soft clay limst. + soft clay. Fossils.

31 ft.

Fairly solid limst. With very few fossils.

3 in.

Coarse congl. pebbles = 3 in.

That part of the section below the double line
was secured at locality = 30

2) 29a) South of Floyd's Fork.
Immediately S of the Bridge. On
~~Streptelasma rusticum~~ road to
Mt Washington.

Abundant Richmond fossils in
soft rubble clay begin 15 ft higher
than next layer

0 Streptelasma rusticum.

1 ft Soft dark blue clay. Columnaria
with corallites separate at top in place
and having separate epitheca.

9 ft. Soft clayey limestone and soft clay

31 ft Fairly solid limestone. Practically
with int fossils or with very few.

3 in. Coarse congl. pebbles - 3 in. in diam.

12 ft. Solid l. with very few fossils.

12 ft. Softer clay.

Clayey thin limest. full of bryozoans
& *Orthis laticosta*, var.

The lower part of the Floyd's Fork
section, as far up as the *Streptelas-*
ma rusticum layer, contains a
considerable amount of fairly solid
limestone.

The *Strophomena planumbona*
comes in with the soft clay full of
rubble limestone, in the Richmond
group above.

30) 30) 1 3/4 mi. from Floyd's bridge
North of Mrs. Mary E. Clark.

Upper Ozgood clay

5 ft. Ozgood limest. = Lower Laurel?

17 ft. Lower Ozgood clay

2 ft. Basal Niagara

2 1/2 ft. Salmon brown Clinton.

20 ft { 3 ft. weathering thin bedded. Massive south.

6 ft. banded Madison.

11 ft. weathering thin bedded.

3 1/2 ft. banded Madison.

8 ft. Weathers to thin bedded Madison.

? 2 ft. Harder bed, clayey, spally. thin.

13 1/2 ft. Clayey. Fossils get scarce towards
top

3 1/2 ft. Part area, *Streptelasma*, *Rhynchotrema*

Limest. rubble. *Cepax*, *St. planumbona*, small.

Abundant Lower Richmond fauna.

At base *St. planumbona* begins to
be common.

5 ft. Limest. rubble. with fossils. *St. planum-*
bona is found 2 ft above base.

2 in. limest. *Streptelasma*.

3 ft. clay and clayey limest. At base is
limest. with *Streptelasma* & *Columnaria*

22 ft. rubble limest. Fossils common
but no Richmond fossils are recog-
nized.

3 ft. clayey.

5 ft 6 in. (May = 10 ft?) with *Tetradium*.

15 ft 9 in. Massive l. with globose *Chaetetes*
as at Howard's mill.

14 ft. Massive l. interbedded with soft clay.

12 ft. soft clay.

2 ft. clayey limest. full of fossils, bryozo-
ans, & *Orthis laticosta*.

4)

31

Cont. on p. 8.

South of Mt Washington. Along
Whittaker's creek, along Boardman pike.

Salmon brown Clinton.

- 31½ ft. Good banded Madison.
8 ft. { Poor massive Madison above.
Sandy clay below owing to weathering
1½ ft full of fossils.
3 in. limestone.
23½ ft { Concretionary rubble limestone full
of fossils.
at top = *Stroph. sulcata* + *Orthis occidentalis*
with scarcely distinct dorsal sinus.
4½ ft Concretionary rubble limestone. At base
with *Beaticella undulata* + *Heterospo-*
gia
at top is *Streptelasma rusticum*.
12 ft covered. Probably like rock beneath.
41 ft. Massive Madison Lover.
Quite massive until near base
when it becomes a ^{more} clayey rock.
5 ft. Soft clay rock.
2 ft 8 in. Clayey limestone with *Constel-*
laria prominens? One large *Orthis*
lynx with subquadrate form. = The
bed at base of Floyd Fork section.
2 ft 6 in. Hard limestone with fossils.
19½ ft. Clay rock limestone full of fossils.
One strong *Orthis lynx* = subquadrate
form.
Hard limestone. Top 4 in. = flat. Below =
crossbedded. Beautifully exposed by
weathering. Crossbedding due to
wave action, forming crescentic sweeps.
Waves from the West. About 20 ft long.
Shore runs N 40 W.

2 ft total

Sweep of waves from SW.

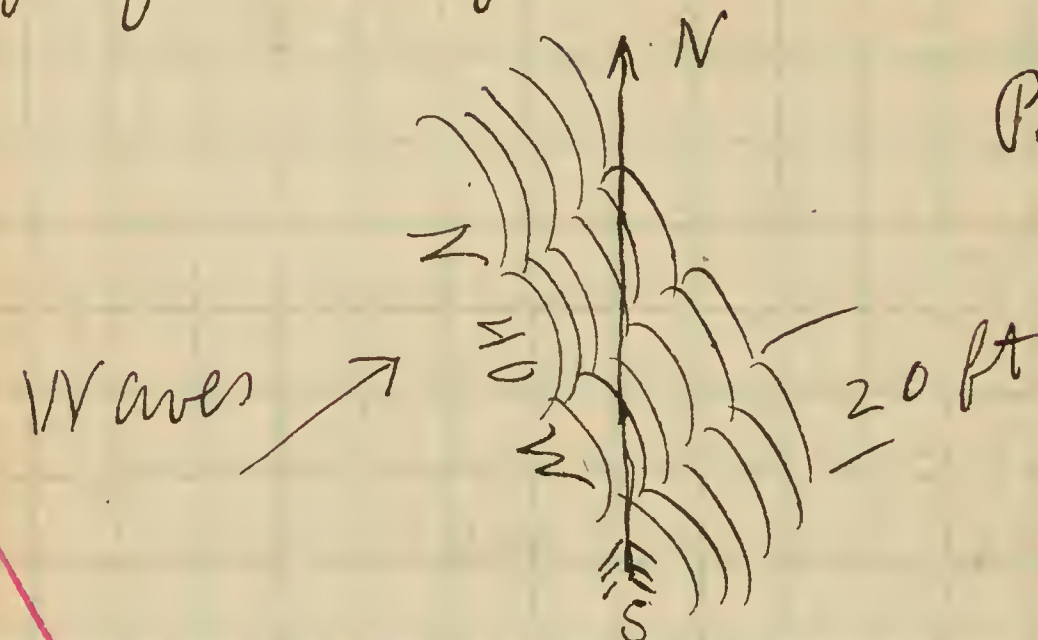


Photo 5.
Clinton.
Photo 6.7
Waves.

A very dark blue sandy layer of lime-
stone contains *Orthis lynx* more a-
bundantly.

- 28 ft { 1½ ft. More, crossbedded sandy limestone.
Coarse dark blue limestone with *Orthis*
lynx abundant down to level of
creek at Jasper's store, a short dis-
tance N. of where the road towards
Grinnel's Ford turns off westward.
Base of *Orthis lynx* bed not seen
here.

Grinnel's Ford to Jasper's store = 4 mi.
Smithville " " " = ¾ " "
Gar rock " " " = 2 "

Grinnel's Ford to Lick Skillet = S 4 mi.
Shepherdsville " " " = W 3 mi.

6.

32

Cont. on page 9.

200 ft. south of Asa Lutes, $\frac{1}{8}$ mi. S. of
Greenwell's Ford.

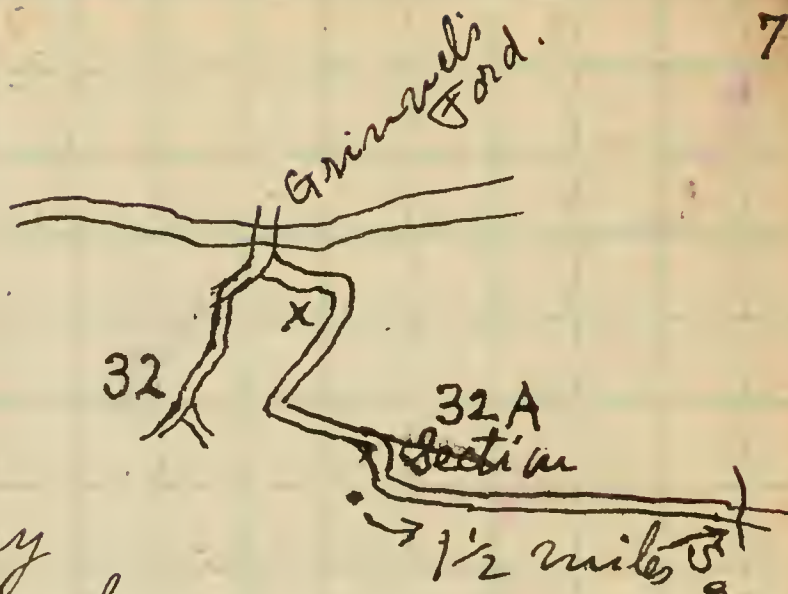
- 4 ft 2 in. Clinton. salmon brown + siliceous.
siliceous red on top.
- 26 ft. banded Madison.
- 20 ft. The upper part grades into the Madison.
Only the lower 9 feet fossiliferous. Only
Lower Richmond fossils seen.
- 11 ft. At top *Strophomena planumbona* is com-
mon. Clayey. *Strophomena* occurs
2 feet above coral bed and also in
thin blue limestone 2 in. above coral
bed.
- 1 ft. *Columnaria halli* bed. Corals abundant.
Tetradium minus just beneath.
- 9 ft. Covered. Probably soft clay rock.
- 6 ft. Limestone layers with fossils in clay rock between.
Road turns off W up Lutes Hill.
- 35 ft. Lower Madison. solid, green clayey rock.
- 1 ft 8 in. *Columnaria halli* rather common.
- 12 ft. Various clayey rocks.
- 6 ft. Fossiliferous clayey limestone, weathering to clay
with *Orthis laticosta* var.
- 5 in. Solid blue limestone, with fossils.
- 9 ft. Fossils above, less common below.
- 2 ft. Level sandy rock with rough top, overlying
crossbedded layer, over second level rock
over second crossbedded layer with coarse
Orthis lynx silicified. More sandy
rock with *Orthis lynx* below.

Section ends within 50 feet of Mr. Mont
Roby's house.

32 A

7

X = From Greenwell's Ford
E $\frac{1}{2}$ mi. Then up steep hill



Cedar glades due to
abundant Osgood clay
Osgood clay purple near base.
3 ft 10 in. basal Niagara. in solid 8 in. layers.
2 ft. Clinton.

Kirby Jones Section = 32A

From X road turns S 40 W for $\frac{3}{4}$ mi.
then S 70 E on gravel road for $\frac{1}{2}$ mi and
then down hill along fine section.
= good steep section.

- 5 $\frac{1}{2}$ ft. solid limestone - Lower Gannet?
2 ft. clayey limestone - upper Osgood clay?
18 ft. Osgood clay
5 $\frac{1}{2}$ ft. basal Niagara. = thick layers.
1 ft. gray Clinton. With fossils.
25 ft. banded Madison.
11 ft. brown sandy clay.
2 $\frac{1}{2}$ ft. clay with *Stroph. planumbona*.
3 ft. limestone rubble with *Stroph. sulcata*,
Rhynch. capax, *Protarea vetusta*, *Stroph.*
planumbona. Near top are thin lime-
stone layers with *Stroph. planumbona*.
6 ft. *Stroph. planumbona* begins at top of rubble
limestone
1 in. Thin limestone with *Column. alveolata*.
2 ft 2 in. rubble stone.
8 in. *Strophelasma* 6 in. above corals in limestone.
1 ft. Coral bed.
15 ft. soft
2 ft. solid.
11 ft. Part weathered to porous rubble.
38 $\frac{1}{2}$ ft. = Lower Madison solid rock.
0 ft. rock with *Orthis laticosta* var.

Clinton with *Plectambonites sericea*.

Rhinopora frondosa typical.

Orthis (*Dalmanella*) *elegantula*.

(*Stroph.*) *Orthothetes subplana*. - flat but raised at beak.

Orthis flabellites

Favosites favosus.

21 ft. Ozgrod clay

8 in. basal Ozgrod, no chert, reddish brown. siliceous.

2½ ft. Clinton. salmon brown. coarse grained and rough irregular bedded. No chert. Upper 4 inches with whitish blotches. This may be the cherty part southwards. [= N. of Flagg's Fork.

The basal Ozgrod clays are purplish.

all exposed as at Hays Spring.

2 ft. basal Niagara.

3-4 in. of reddish siliceous rock.

21 in. salmon brown, coarse + irregularly bedded. [= 1 mi. N. of Mount Washington.)

Ozgrod limest.

20 ft. Ozgrod clay. Purple below, indurated above.

44 in. basal Ozgrod Niagara No chert

24 in. transition, red. sil. with *Favosites favosus*.

22-44 in. salmon brown typ. Clinton. *Halyx* etc.

Orthothetes with flat valve and raised beak.

Orthis flabellites. *Rhinopora frondosa*. *Cyath.*

Phyllium Daytonense, large specimen.

Very R. rough bedded Clinton with sandy patches.

Lowell

S. of Asa Lutes house.

2 ft. clayey

3½ ft. Ozgrod limestone

22 ft. Ozgrod clay purple at base.

2½ ft. basal Niagara. brown clayey rock.

10 in. hard stone. Whitish where not weathered. Traces of chert at top.

15 in. Thin bedded whitish rock.

20 in. granular blue Clinton.

A few hundred feet N of Asa Lutes house the Clinton is salmon colored. 20 inches thick, and contains *Orthis flabellites*.

at W.R. Greenwell's house, about 1 1/4 miles from Greenwell's Ford.

oolitic layer 2-3 inches thick.
Laurel.

{ Osgood limestone not well exposed
34 feet to top of Laurel from next
6 ft harder rock ←
6 1/2 feet indurated clay rock.
13-15 ft of softer Osgood clay. lower part
not well exposed.
Whole = Osgood clay section.

2 ft rotten limestone with traces of chert
in lower part = called Clinton southward.

4 ft. Granular grained Clinton, chiefly
blue, but a portion 6 in. from the top
is salmon tinged in places. Contains
Halysites, Orthis bifurcata and
Orthis flabellites, at all levels in case
of last two species.

End of section at Jess Ruby's house.

Cedar creek 1/2 mi. beyond Ted Weller.

Osgood clay. lower part = 18 1/2 ft. beautifully
banded with red purple and greenish brown.

Bazal Niagara not measured.

6 ft. Clinton. probably not the total section.
Chert 2 ft from top. Indurated clay above the
Clinton. thickness unknown.

Exposed for 1/3 mi. in creek, along the road.

Weller's house. About 1 mi. N of
Skillet.

coniferous. very white. No fossils.
about 20 ft. above the (Louisville?)
Waldron shale.

About 3 mi. from Shepherdsville, along the
creek below Lick Skillet.

Weller's Run or Bull's Run on Mt. Washington road.
Waldron shale

3 in. oolitic rock.

Laurel. base not seen but thick
section exposed along creek.

One and a half mile from Shepherdsville
on road to Cedar Grove Church.

Black shale

Crimoidal Coniferous.

Thick exp. of Louisville

Pentamerus oblongus in loose blocks
beside the road.

Come Springs store, 10 full miles to
Shepherdsville, SE of store's mile

Clay layer

- 5½ ft. Asgood limestone.
- 5 ft. indurated clay, calcareous.
- 17 ft Asgood clay, brown above, blue middle,
purple below.
- 2 ft. basal Asgood. prr.
- 5¼ ft. Clinton with cherty layers.
- 6 in. granular bluish Clinton.
- Photos 6 (200 ft) 7-150, 8-40 ft, 9-10 feet
off from Asgood clay exposure.

39

Along boundary creek. E of Come Spg. Stat.
1¼ mile east of station.

Black shale.

Coniferous, coarsely crinoidal. Thickness
unknown.

3-5 ft Louisville varies from 3-5 feet in
thickness at different points.

9 ft. Walden shale

1 ft. Acolitic.

Laurel not measured.

Asgood clay not measured

Asgood limest " " "

23½ ft Asgood clay purple below. Exposed in
a little gully on E side of creek N of
house with distillery etc.

4 ft Basal Asgood limestone decayed, crumbling
stuff

Clinton. top of chert is 1 foot below top of
Clinton.

In lower layer 9 feet below top of Clinton
occur: worm borrows on top of l. layer.
Clathropora frondosa.
Phacopora multifida with
less numerous branches.
Orthis flabellites
Dalmanella elegantula.
Plectambonites transversalis
Strophomena patenta with
anterior margin not turned
up.

About 7-9 feet below top of Clinton or
for 2 feet above fossil layer the
rock contains Calcite masses. The
cherty layers begin higher up.

On a former visit the following Clinton
notes were secured:

Orthis flabellites is common 6 ft 8 in.
below Asgood clay base, in siliceous
bluish rock.

Orthis flabellites common also 7 ft 2 in
below Asgood clay in crinoidal blue rock.
Next chert is 2 feet below Asgood clay
base and it contains *Favosites*,
Favosites, *Orthis flabellites*, *Orthis othetes*
flat with raised beak.

Where road leaves creek and turns
W. to Come spring store, the crinoidal
Clinton is 8-9 in. thick.

13-17 ft { In a dism. section. Only lower 4-5 ft
are color banded. The very fossilif-
erous Richmond begins 12 ft lower.

E of William Mc Sander's house, at
E end of glen or valley, entering bound-
ary creek.

2 1/2 mi. from Coase Springs Sta.

Clinton.

→ 9 ft below Clinton is highest sponge.

18 ft sandy decayed Madison.

Most sponges are found now
at the top of the fossiliferous expo-
sure. If the base of the banded
Madison is 15 feet below the Clinton
the top of the banded Madison is
probably still beneath the sponge
layer.

The thickness of the richly fossilifer-
ous Richmond section was not
measured. It equals about 5 feet
as near as I can remember. One
stray Columnaria was found, pre-
sumably C. alveolata but no record
was made.

Farther S. along the creek, Columnaria
halli occurs 17 feet below top of
richly fossil. Richmond section.

9 feet lower than the C. halli layer
more C. halli occurs in association
with Tetradium vivans.

~~Phyllo~~

39 B

Samuel's.

9 ft { 1 1/2 ft chert in soil.

7 1/2 ft. massive with Calceit } Clinton.

5 ft weathering to clay.

1/2 ft. thin limestone.

4 ft Madison like rock.

at bridge 5, E. of Hobbs. 1 mi. W. of Coase Spgs.
E. of bridge.

Black shale

coarsely crinoid Corniferous. 2 feet seen.

11 1/2 ft. Louisville 13 feet = 2nd measure

{ Top of Waldron about on RR level.

about 7 feet of Waldron shale.

oolitic top of Laurel with

Orthothetes subplanus

Spirifer endora

Whitfieldella nitida.

W. of bridge. 16 ft Louisville. porous dol. l.

Top of Waldron is 4 feet below RR
level. In Waldron = Rhynch. cuneata.
Spirifer endora. Sp. radiata. Chonetophyllum.

41

at bridge 4, east of Hobbs, the middle of
Waldron is at track level.

42

Small Pentamer. oblongus
in Louisville. 5 ft above base

Hobbs station.

Base of Waldron is 5 ft above RR.
oolitic layer { ~~Top of Waldron is 5 ft above RR.~~
~~Spirifer endora. Rhynch. cuneata.~~

35 ft Laurel down to shale in Laurel. See

Burdston section. The crossed out
fossils in oolitic layer
or shale remain

18 in. Blue clay shale

Limestone = Lower Laurel? 2 ft seen.

Theodore Habich. Digger of well.

Chapeeze Station. Bullitt Cr.

Chapeeze

In Waldron shale - Rhynch. cuneata. Spirif.
endora, Spirifer radiata, Chonetophyllum.

Clermont.

Photo 1 Waldr.
2 Waldr. + Lams.
3 Waldr.

45 ft Louisville

33 ft above base occurs *Pentamer. oblongus*.
A species of *Holocyrtites* with the club
like form and grooved top was col-
lected at east end of quarries, one
mi. E of station.

9 ft Waldr. shale, with *Atrypa retic-*
ularis. base = 12 ft above RR Track.

6 in. volitic. in places 12 in. thick.

Lamell limestone.

Upper 20 ft. quarried.

Quarries extend about 1 mi. from
Clermont E to Hobbs station.

18 ft below top occur *Calymene*
Waggonensis, common, and
Certhoeceras amyens but larger,
No longitudinal striations as in
O. annulatum.

Lamell rock used for

1. 14th St. bridge. Louisville except 2 piers on
Indiana side which came from Utica
2. Crescent Hill Reservoir.
3. Most canal walls at Louisville.
Locks made from Bedford rock.
4. Near all L & N bridge work in Ky.
5. Crabing in Louisville. Good deal.
6. Baptist church. Bardston.

Quarried opened in 1862.

Belong to L & N. R.R.

Just south of school + church at 14
mile post from Bardston on
Mt. Washington road.

Columnaria halli on road side.
Farther down hill side on W of
road is whitish limestone
with *Grova Silurian Certhis occi-*
dentalis + *Orthis bifurcata*

45

An eighth of a mi. S of 44, just S of
Steve Loyd's house. *Columnaria*
halli abundant on road side = highest
point between Salt River + High Grove.

46

Road angle at Sam Well's house =
11 1/2 mi. N of Bardston.

Columnaria halli. Road remains
at about same level for long dis-
tance S.

47

Mrs. Geo. Abell. 8 1/2 mi. N of Bards-
ton. Thin bedded Lower Silurian
a considerable distance below
the Clinton. In fact very far below.

If any Clinton occurs N of Bards-
ton it is believed to occur not
farther North than 3 miles of town.
No exposures of Clinton occur any-
where near the pike.

- ? 8 ft. isolated patches of limestone at E edge of town
- 47 ft { 25 ft. continuous exposure. Upper Laurel.
1 ft blue clay
11 feet limestone. Lower Laurel.
2 ft weathering to soft blue clay.
1 ft 8 in. limestone. Or good.
- 41 ft { 36 ft clay shale, purple below.
2-3 ft light brown, arenaceous limestone breaking up into pieces 4-6 in. square.
- Of the basal Niagara forming the rock last mentioned, the upper foot consists of fairly good limestone while the lower foot weathers soft

Clinton. See also page 21.

S. of bridge.

1 ft l. not cherty.
Highest cherty layer
with *Orthothetes subplanus*
13 ft

Farther S, 800 ft.

1 ft not cherty
Highest cherty bed
—
8 ft 9 in.

Lowest cherty layer with
fossils on next page = A

7 ft 5 in. l. arenaceous,
with calcite in lower
third.

Lowest cherty
bed

12 ft brown-
ish arenaceous
rock with cal-
cite through out
entire thickness

Ordovician

See page 20.

Clinton Fossils

A. Clinton just S of bridge.

13 feet below top in cherty layer.

Calymene *Vogdesi* large head +
large pygidium.

Encrinurus very small. pygidium
as large or smaller than in *E. Thresh-*
eri but = *punctatus* probably.

Ilacrus Doytensis pygidium.

Cyclonema Clintoni var. with
raised revolving striae very
distinct but not as strong as
in *C. varicosum*.

? *Spirifer* like *Niagarensis*, small.

Orthis flabellites.

Dalmanella elegantula

Platystrophia 2 plications in
sinus. both small + large form.

Strophomena Hanoverensis also
interior of ventral valve. Is this
St. patenta?

Plectambonites elegantula small.

Plectambonites transversalis.
large.

Rhynchonella scobina.

Hemitrypa Ulrichi

Pachydictya bifurcata.

Rhinopora frondosa.

Photo 4. White streak at base-
lowest cherty layer. to top
of highest cherty Clinton.

Photo 5. Near view of cherty
Clinton.

Ordovician.

- 1 ft. thin bedded.
Tetradium.
7 ft. clayey limestone.
- 29 ft. 10 ft. soft clay. No fossils.
- B 11 ft. { Limestone full of fossils. Top of
fossiliferous section = 11 feet above
Coral bed

Coral bed. *Columnaria alveolata*
Calopocia cribriformis.

Ordovician fossils.

- *Rhynchotrema capax*, rare.
- *Platystrophia acutilirata*.
- *Dinorthis subquadrata*
- *Stroph. rugosa* = *vetusta*?
- *Rafinesquina alternata* large.
Also form very flat = *fracta*.
- *Platystrophia bipinnata*
- *Strophomena acuticuma*.
- *Pertonia vetusta*.
- *Zygospira modesta*
- *Strophomena sulcata*, small
form, fine interior as at Dayton.
- *Bysocyphia radiata*.
- *Zophospira*, small acute
- *Zophospira tropicopleura*.
- *Hebertella occidentalis*.

Clinton. S. of bridge.

- 13 feet from top of cherty layer to
lowest cherty layer.
- 2 ft 8 in. { 13 in. to base of quarried Clinton
bedded { 12 in. layer of l. brownish
7 in. layer of l. brownish
- 5 ft 6 in. { 4 3/4 ft. massive rock with calcite
lumps, especially in lower half.
9 in. with numerous worm
borings at top. Thin banded.
Clayey rock, soft. Tetradium.

At Withrows Run, 1 mi. W. of Bardstown.
E. side of creek.

- $\frac{2}{3}$ ft. basal Niagara
- $\frac{1}{2}$ ft. weathering clayey
- $12\frac{2}{3}$ ft. Thin bedded Clinton.
- 11 ft. Thick bedded massive arenaceous with calcite.
- $\frac{2}{3}$ ft. Thin bedded layer
- 5 ft. Weathering soft
- $5\frac{1}{2}$ ft. Banded Madison greenish + red. brown.
- 8 ft 9 in. Clay rock hard above soft below.
- 1 inch. Thin bedded l. with *Strophomena* plenty.
- 5 ft. blue clay rock + limst. with fossils
- 1 ft. coral bed. *Columnaria abbreviata*
- 20 ft. down to creek level.

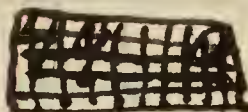
About 5 feet below top coral bed is

Palaeophyllum divaricans +

Protarea retorta = About on

level with lower coral bed?

Photo 10. Sycamore broken by cleet.



W. side of Withrows creek, W. of Bardstown.

Photo 11. Bottom projecting layer is thin bedded layer at top of Ordovician. The top distinct layer is base of well bedded Clinton.

Photo. 2.3.4. of second set.

Junction of arenaceous Clinton base and soft top of Lower Silurian. The thin bedded layer is between.

Buffalo creek 3 mi. W. of Bardstown.

- { 2 ft. weathering soft, especially lower half.
- { 8 ft 4 in. Thin bedded Clinton.
- { 10 ft. Massive Clinton.
- 5 in. Thin bedded.
- $1\frac{1}{2}$ ft. clay rock spalling, weathering soft.
- 6 ft. Banded Madison.
- $6\frac{1}{2}$ ft. looks like greenish Madison. Not banded. Weathering soft.

E side of creek.

West of Cedar Creek, 5 mi. W. of Bardstown.

- { 8 in. oolitic layer
- ? { 10 feet poor exposure.
- { $34\frac{1}{2}$ feet continuous Laurel exposure.
- 2 ft. clay layer in the Laurel
- $9\frac{1}{2}$ ft. limestone, rather below.
- 25 ft. Asgood clay.
- 6 ft. Basal Asgood + top of Clinton.
- 5 ft. thin bedded Clinton without chert.
- 6 ft. massive with calcite.
- 2 ft. softer rock. Is this Ordovician. It weathers more readily than overlying part but breaks up brownish like rock above.

I am not certain whether the Laurel exceeds 35 feet in that part of the section overlying the Laurel clay. The section appears thick but this may be due to a considerable westward dip of the rock.

Near mouth of Cedar Creek W. of Bardstown.

Black Slate

8 ft. Coniferous

Upper Laurel, not measured
Clay not exposed.

5 1/2 ft of Limestone as at other Cedar
creek exposure.

25 ft. Good clay on S side of creek

[30 ft. Good clay on N side of creek
= 27 1/2 ft. on average]

1 1/2 ft. Limestone. Solid here. Some half
weathers elsewhere.

2 ft. with chert.

5 1/2 ft. thin bedded

14 ft. with calcite. Botland.

5 ft. indurated clay above. Ordovician.

2 ft 6 in. Madison rock.

10 1/2 ft. Clayey

1/2 ft. One Col. alveolata.

5 ft. Fossils in clay rock.

1 ft. Coral bed. Tetradium. Col. halli.

7 1/2 ft. down to creek.

(Observed later than on p. 22)

Witter's Run. W. of Bardstown. 1 1/2 mi.

36 ft. Or good clay.

13 ft 8 in. Regular bedded Clinton & basal Niagara

11 ft 8 in. Massive Botland rock.

1 ft thin bedded top of Madison.

5 ft 2 in. softer Madison

6 ft. hard Madison

2 ft 6 in. Rock like above but softer.

3 1/2 ft. clayey rock weathered to soft stuff

4 in. Fossils in clay rock.

1 in. Thin limestone full of good Stroph.
planumbona (= vetusta?)

3 ft 9 in. Clayey rock with fossils

1 ft 5 in. Clay rock with fossils. at top is
lowest thin fossiliferous hard
blue limestone.

3 ft. soft clay rock. at very top are lowest
Protarea and St. planumbona

3 ft. Great Coral bed. chiefly in middle
2 feet. Calopocia cribriformis
rather common at cre point.
Largest cribriformis = 8 in.
Columnaria alveolata. Streptelasma rusticum.

2 ft. A stray Columnaria alveolata
at top of clay rock.

7 in. Hard blue limestone. Horizon marked.

11 in. Clay rock.

9 in. Clay rock. Streptelasma.

4 in. Clay rock. One Col. alveolata.

3 ft 2 in. Clay rock. One Streptelasma

8 1/2 ft. Covered. probably soft clay and

3 ft. Clay rock. Lower Madison. hard top.

0 Creek bed. Lower Madison.

at 30 Times Distillery. At RR crossing.
Waldron. only 4 ft exposed.
8 in. Top of Laurel limestone dolitic

R

Coniferous chert with small *Ambocoelia*
abundant.

7½ ft. Louisville.

9½ ft. Waldron

8 in. Dolitic Laurel.

S

Dolitic top of Laurel.

71

Cut E of Gasburg or

1 foot limest. lower half weathering soft.

10 ft. more white & bedded well.

8 ft. Massive Botland. with calcite.

10 in thin bedded layer.

4 ft clay, soft at top and bottom.

8 ft. Madison bed.

18 ft soft greenish clayey rock.

1 ft. Coral bed. *Columnaria alveolata*

Photo. 12. Cut. Well bedded Clinton
begins above the middle.

73

¼ mi. NW of Botland.

Lower Laurel (below clay) at top of hill.

West of Needmore. in Cane Run.
NW of Botland. Above bridge
down to below bridge.

45 feet Osgood clay. S of bridge. Thick
section probably due to dip of rock
towards north here.

1 ft limestone. weathering below.

16½ ft. whiter & better bedded.

6 ft. Massive, lower 6 in. thin bedded
but not distinct from the rest.

1 ft. clay rock.

1 ft. soft clay.

5 ft. Greenish clay rock with *Tetradium*
at all levels.

Madison bed.

72B

Stewart creek E of Bardston.

Fine exposure of

Laurel clay

Lower Laurel

Osgood clay

{ Clinton well bedded and

{ Botland bed

72A

Cox creek entering Mill creek on B. pike.

Botland bed.

1 ft Thin bedded top of Madison.

7 ft. White clay rock full of *Tetradium*.

22 ft { Heavy massive Madison.
Hard blue l. layer at top of fossiliferous Rich-
mond. Contains *Isotelus gigas*.
Cobble limestone and clay.
Great coral bed.

NW. of Fredericktown. from Chester Cecil's house, at bend of road, to top of hill at farther end of ascent by Bardstown pike.

Tetradium bed with abundant Stromatopora or gr. noths. Massive.

24 ft covered

2 ft. Massive coral bed.

20 ft { white rubble limestone.
unknown.

17 ft Madison soft clayey

4 ft. Massive Madison

14 1/2 ft covered

15 ft. { Thin bedded clayey limest. above
Irregularly bedded clay rock below.

9 ft. Thin bedded clayey limestone Beatricea

2 ft 4 in. Massive limestone.

8 ft 2 in. Limestone + clay with some fossils.

0 Orthis lynx, typical, abundant.

21 ft. Orthis lynx and Amb. Casei in blue l. rubble, Lynx bed apparently not thicker than 30 ft. exposure too interrupted below for study.

86 ft Not well exposed along pike, but the lower 30 ft. fossiliferous on hill side on W. side of pike.

Strophomena planumbona at base of section.

3/4 mi. N. of Balltown.

Corniferous.

Lamell. Considerable thickness.

1/2 mi. S.W. of Balltown.

Top of Lamell not seen.

22 ft { Lamell

{ Asgood limestone.

27 1/2 ft. Asgood clay. Dip S increases.

23 ft measured vertically! Intra 6 1/2 feet = massive.

2 in. Trace of thin bedded layer.

1 1/2 feet part of bed below weathering soft.

6 feet rather massive. Madison?

13 feet weathering soft with Richmond fossils near the middle.

1 foot. Coral bed. Columnaria alveolata.

2 mi. N. of Abbey La Trappe on Balltown road.

21 in. Coarsely crinoidal Corniferous. Lamell not oolitic at top.

Photo 5. 1 mi. N. of Abbey of La Trappe.

West of La Trappe.

Black shale.

11-16 ft. limestone below. More thin and clayey above. Upper Laurel.

7½ ft. limestone. Lower Laurel.

{ 2 ft. soft clay. Upper Osgood clay.

1½ ft. poor clay limst. weathering to rubble.

31 ft. soft clay. Osgood.

Clinton - top.

88.

Half a mile (= ¼ mi?) N of New Hope.

Black shale.

8 in. thin crinoid. Coniferous.

5 ft. Laurel l. (= Osgood limestone?)

35 ft. Osgood clay

11½ ft. cherty Clinton.

2 in. chert bed. distinct.

4 ft. massive, with calcite.

4 in. soft clay. with large Tetradium.

2 feet forming whitish limestone where ~~common~~ Tetradium is common

3 feet 8 in. blue clay rock.

Tilford Station. Distillery N. of New Hope.

4 ft. Coniferous. crinoidal, cherty. Plenty of chert.

1½ ft. brown sandy rock { conglomeratic above with very small pebbles. Fish teeth and other fish remains in lower 1 foot.

5½ ft. clay limestone. No chert. Osgood?

15½ ft. Clinton cherty at middle + top. Massive at base. with calcite

23 ft. { Soft blue clay. Madium like rock not well exposed.

Great Coral bed. Columnaria alveolata.

90

Willow Spring Distillery. Between Cross Hollow + Tilford Station.

For upper 5½ feet see section above.

12 feet to top of very cherty layer.

2 in. good chert bed.

7 ft 4 in. Massive Clinton with calcite.

6 in. clayey.

2 ft 3 in. Tetradium abundant but not as common as at New Hope.

5 ft. Harder Madium bed.

Softer Madium bed.

E. of D ant.

5 ft 3 in. Corniferous. Lower 2½ feet very crinoidal.

5 ft soft Asgood clay, Clinton massive looking, with calcite in upper 2 feet.

Top chert layer is found 2 feet below top of Clinton.

The massive appearance probably due to absence of weathering since the exposure in the cut is quite fresh.

A E

West of Chicago.

Impossible to determine just how much Clinton was preserved. The following observations are the result of careful measurements.

Black shale

1 foot brown rock

6 in. crinoidal rock

Corniferous

15 feet Clinton. Lower 5 feet - massive, 8 in. thin bedded.

2 ft with Tetradium.

4 ft. Madison bed but here it is weathered so as to be very soft.

6 ft. weathering softer than bed above.

8 ft. hard at top, softer below.

2 ft. Coral bed. Columnaria halli.

Chicago. West of distillery in N.W. part of town.

Black shale.

2½ ft Corniferous { 6 in brown rock
2 ft. crinoidal

15 ft Clinton
Thin bedded

110

West of Goretto.

Black slate.

Cornif. { 6 in. brown rock with worm burrows.
crus { 3 in. not exposed.

17½ ft Clinton.

Soft clayey rock.

105.

North of Goretto.

Black slate.

Corniferous. { 2 ft 3 in. of brown rock
with worm burrows at top
9 in. white crinoidal l.
weathered away in places.

3 ft 3 in. regular bedded, containing calcite + some chert.

7 feet. Massive Clinton with calcite.

6 feet 9 in soft clayey at top
Madison bed, top.

Long Smith. $1\frac{1}{2}$ mi. SE of Chicago, on
St. Mary's road.

- 5 ft. Clinton. Massive basal part + calcite
- 1 ft. thin bedded layer.
- 5 ft. clayey rock, like Mad. below, but softer.
- 5 $\frac{1}{2}$ ft. Madison, slightly harder than above.
- 12 ft. softer rock.
- 1 ft. Great Coral bed, in places forming
a hard l. bed. *Columnaria halli*.
Streptelasma rusticum + other
Richmond fossils.
- Below Coral bed just described
are various thin blue limestone
beds with *Gabechia olivensis*
+ *Calopepla cribriformis*. One
thin with *Leperditia calcigena*.
The levels at which these beds occur
have not been recorded
- 1 $\frac{1}{2}$ ft. Dense blue l. with *Leperditia*
calcigena, small gastropods
and *Gabechia olivensis*.
- 40 feet of Lower Madison. Base not
seen here.
- The *Orthis lynx* bed should occur
about 27 feet lower down.

W. D. Miles.

Black slate.

- 5 ft. Clinton. E of house is Clinton.
Chert on the road side.
- The 5 feet of Clinton are found
400 ft S of his house, on S.
side of creek crossing.
- 4 feet of clay rock, spalling. In
the lower part occurs *Tetradium*
where *Tetradium* is common the
rock becomes hard as at New
Hope.
- 2 ft. poorly exposed.
- 1 ft. hard rock.
- 4 ft. poorly exposed.
- 4 ft. hard clay rock.

NE corner of Raywick. where road
to Chicago turns down hill and
crosses the creek. 1901.

Black Shale.

5 ft crinoidal Devonian?

8 ft Clinton. Lowest layer with calcite, but
no chert. Contains *Heliothis*, *Pachy-*
dictya, *calymma*.

7 ft soft clayey Northward, but an in-
durated clay rock southwards.

3 ft 4 in. hard clay rock with calcite + chert.

8 ft 9 in. clay rock. spalling.

2 ft harder clay rock.

6 1/2 ft. soft clayey with thin limestone
beds in lower half. Containing
Richmond fossils.

1 ft. Coral bed. *Col. alveolata*. *halli*.
Calopocia, *Tetradium*.

There are fossils for 7 feet below
this Coral bed. Here there is a
3 inch limestone layer with
fossils = collected.

Later observations 1902.

7 ft. Bedded cherty Clinton.

7 ft massive crystals of calcite. Botland.

10 1/2 ft. clay rock. spalling. No fossils.

3 ft. massive clay.

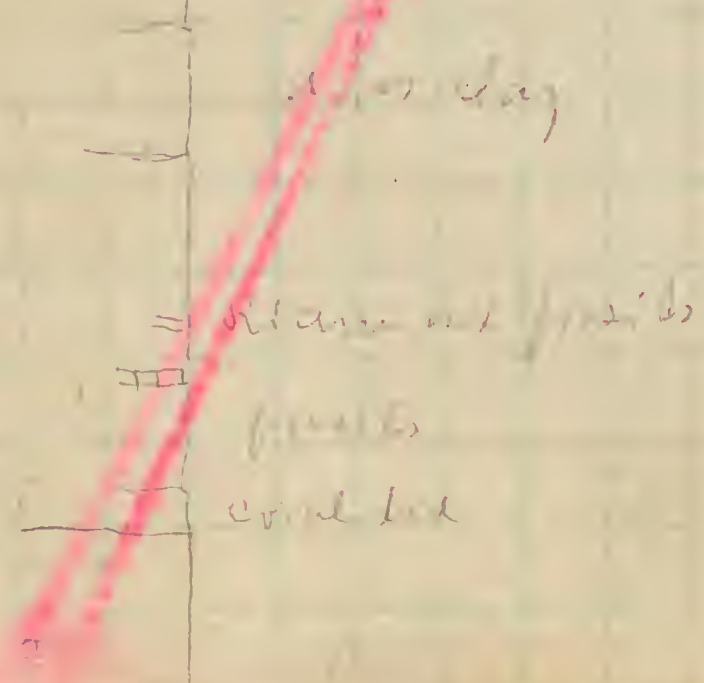
4 ft 9 in. chiefly clayey with thin limestone
containing Richmond fossils 1 ft above base.

4 in close bedded blue l. with Richmond fossils.

2 ft 6 in. some fossils in clay rock.

0 Coral bed. *Columnopora halli*, *Calopocia*
cribriformis, *Streptelasma*.

4 ft. fossiliferous clay, blue. var Richmond
fossils.



Raywick. Richmond fossils.

<i>Hebertella sinuata</i> —	common
<i>Strophomena sulcata</i>	3 specimens
<i>Rhynchotrema capax</i> —	1
<i>Strophomena rusticum</i>	1
<i>Beatricea undulata</i>	2
<i>Platystrophia top form</i>	C
<i>Protarea vetusta</i>	1
<i>Byssomychia radiata</i>	4
<i>Heterospongia subanura</i>	2

39 A

Cane Springs. Richmond fossils.

<i>Strophomena vetusta</i> ?	Ccc
<i>Rafinesquina like pacta</i>	1
<i>Lophospira tropidospira</i>	Ccc
<i>Lophospira perangulata</i> , Var.	cc
<i>Strophomena rusticum</i>	3
<i>Rhynchotrema capax</i>	3
<i>Zygospira modesta</i>	3
<i>Hebertella sinuata</i>	C
<i>Protarea vetusta</i>	1
<i>Platystrophia top form</i>	C
<i>Tetradium fibratum</i>	1
<i>Platystrophia acutilirata</i>	1
" half way to "	several.

Mt Washington Ky.

Beatricea undulata.

Madison Ind.

Heterospongia aspera. Large & nodular.

Connersville Ind.

Beatricea nodulosa. *Dellerophium bilobatum*.

Richmond Ind.

Beatricea undulata.

Bardston.

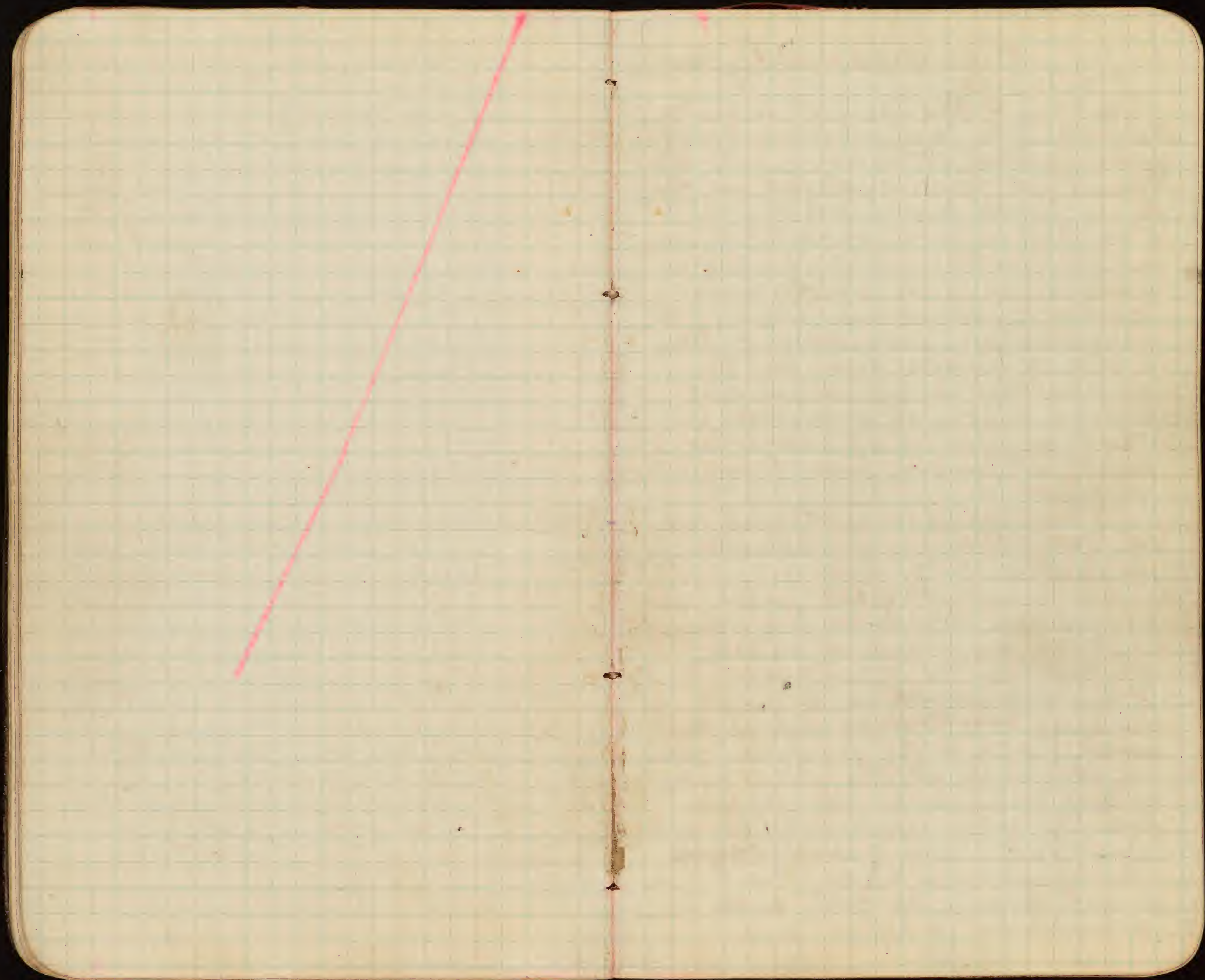
<i>Rafinesquina alternatopacta</i>	8
<i>Strophomena vetusta</i> —	C
<i>Rhynchotrema capax</i> —	C
<i>Strophomena sulcata</i> —	3
<i>Dimorphis subquadrata</i>	1
<i>Platystrophia acutilirata</i>	1
" half way to "	C
<i>Zygospira modesta</i>	C
<i>Strophomena rusticum</i>	5
<i>Protarea vetusta</i>	1
<i>Byssomychia radiata</i>	1
<i>Lophospira tropidospira</i>	C
<i>Lophospira perangulata acuminata</i>	C
but not so acute	

SE of Lebanon. Mudd, beyond Sulphur Spg.

<i>Beatricea nodulosa</i>	1
<i>Beatricea undulata</i>	1
<i>Platystrophia laticosta</i> ?	C
<i>Hebertella sinuata</i>	1
<i>Heterospongia Kuotthi</i>	3+1.
<i>Lophospira ovula</i>	C
<i>Lophospira Burdani</i>	C

Near town. Lebanon.

<i>Orthis lynx</i>	C
<i>Platystrophia laticosta</i>	C
<i>Hebertella sinuata</i>	
<i>Lophospira Burdani</i>	
<i>Heterospongia Kuotthi</i> —	4



Stromatopora subcylindrica
Vol. 7. p. 20.

The form of this species is a subcylindrical tube, somewhat compressed, pitted centrally, with clay. Prominent, conical elevations, varying in height from 1-10th to 1-20th of an inch or more, distributed irregularly over the surface. Radiating lines, more or less conspicuous, crossing the apices and slopes of the prominences, giving some of them a stellate appearance. On the general surface are shown distinct circular or elongate papillae, about 1/20 of an inch apart or more, no or only a few of any kind observed.

A microscopic section shows an irregular porous structure of the interior of the body.

The specimen used for this description is 2 1/2 inches long, slightly arched on one side and nearly straight on the opposite side; 3/4 of an inch ~~in diameter~~ in diameter at one end; ~~1/10th of an inch in thickness~~ 1 inch in the middle, and 1/2 an inch at the other end; 1/10th of an inch in the center from the outer surface to the hollow part. How much larger the specimen may have been is not known, as both ends have a fractured appearance.

Referred to the writer for description by Prof R. H. Holbrook, of the National Mineral University, Lebanon, Warren Co, Ohio. Found near Moron, in the same county, in the shaly beds of the Cincinnati Group.

Vol. 9. p. 38, = synonym. J. F. J.
Leptochia in antiqua Ulrich

Stromatopora tubularis
subcylindrica
lobuloides
scabra
papillata
crad lundensis
brindleyi, Nicholson
indianensis

tubularis Cincinnati Moron
+ Lebanon.

subcylindrica, Moron Clark,
with + Moron Ind.

Ottawa Naturalist.

I. M. Lumber

Labechea Huronensis Billings.

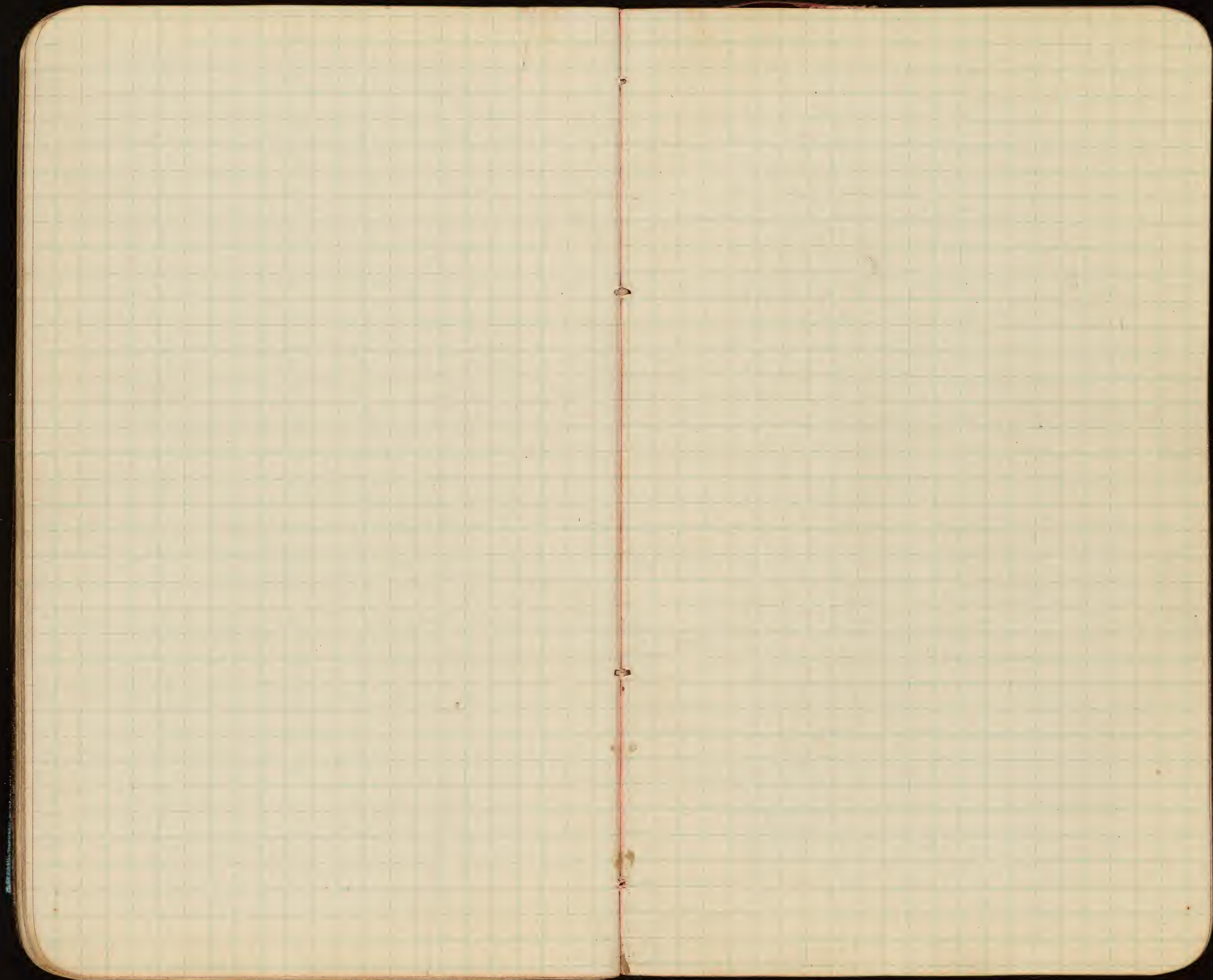
Labechea.

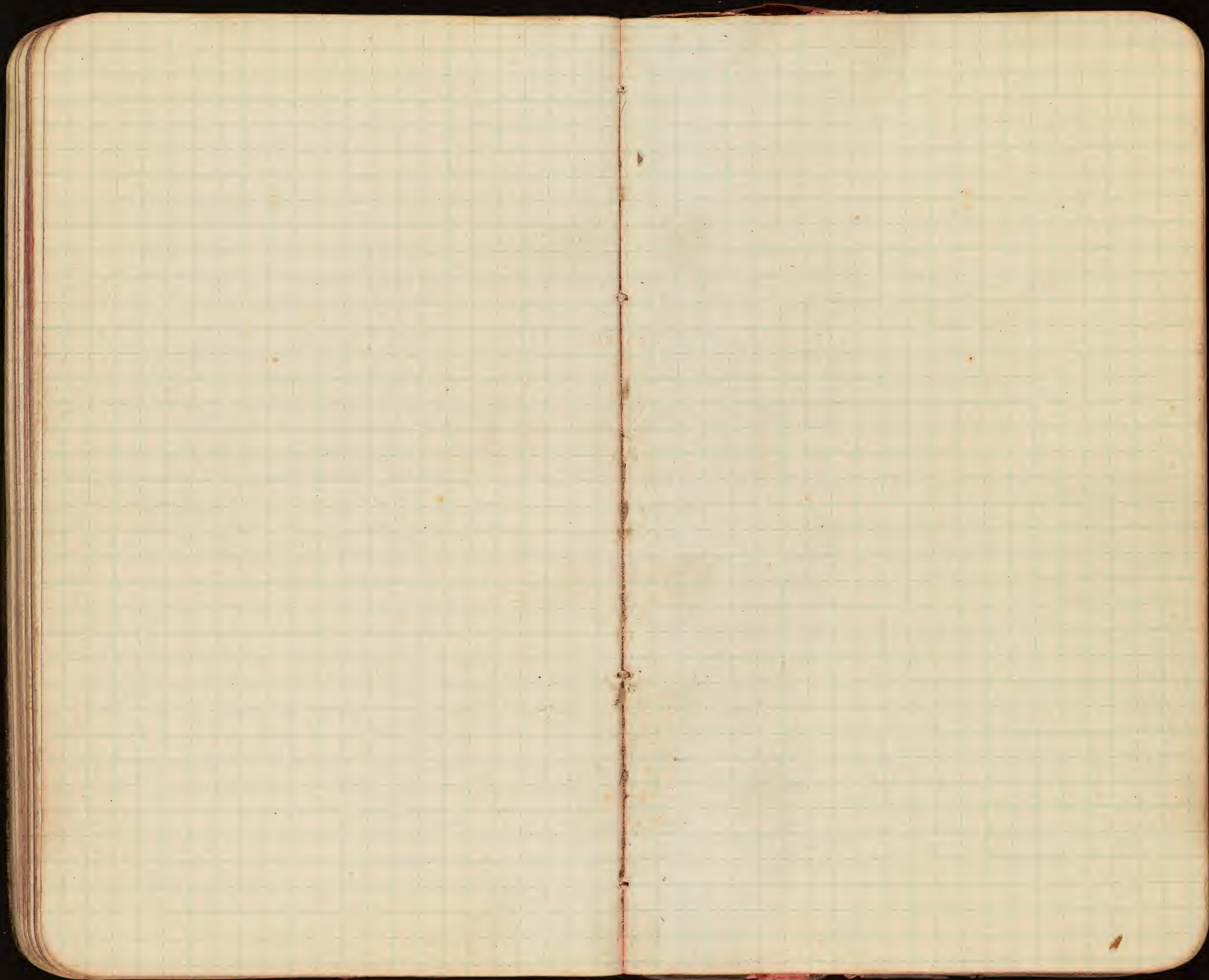
Stenopora Huronensis. types in Mus.
of G. M. Surr. of Canada.
From Cape Smyth, Lake Huron.
Collected by Dr. R. Bell in 1859
(Not by Ford)

Pl. VII p. 1 of Ford's paper. *Labechea*
on *Tetradium pubescens*. - in crusty

Fog 1a of Ford's paper. small
portion of large mass of *Labechea*.
5 1/2 in. across. - in water.
Both are types of Billings.

Dr. Michener states that at Cape
Smyth material is better preserved
than that of any accessible place.





Mr

Cape Girardeau, Missouri

Glyptocrinus finlayi, Shumacher

Rept I + II, p. 110, 154, 194, 219.

Rept '73, p. 263

Ituriscrinus flexuosus Shumacher

Rept I + II, p. 110, 154, 219

Rept '73, p. 263.

Crinoid, small undetermined species.

Glyptocrinus, 2 undetermined species.

Rept '73, p. 263.

Ptychocrinus splendens, S. A. Miller.
Taken from Quarry Cape Girardeau
+ Chester, Ill.

Palaeocrinus?

Rept I + II, p. 110, 219

Protocrinus?

Rept II, p. 154

Rept '73, p. 263.

Mo.

Cape & inland limestone

Tentaculites incurvus, Shumard.
Repts I+II, p. 110, 154, 195, 219, Rept '73, p. 263.
Vol. III, Dec. p. 27, 342, 343.
Tentaculites major, Mo. name, partially
for the next species. Rept '73, p. 263.

Tentaculites tenuistriatus, M + W.
Vol. III, p. 341. Cited from Cincinnati
Group, Alex. Co. Dec.
Arctica, n. sp. Rept I+II, p.
Pterinea thebesensis, M + W.
Vol. III, p. 354. Cited from long upper
Silurian, Alex. Co. Dec.

* *Conularia*.
Vol. III, p. 27. Cited from Cincinnati Gr.
of Alex. Co.

Turbo
Vol. I+II, p. 110, 154, 219
Partially the next species.

* *Cyclonema* plate. Figured but not described.
Eleutheronema
Vol. I+II, p. 154, 219.

Eleutheronema 2 or 3 sp.
Vol. II, p. 219

* *Cyrtolites imbricatus*. M + W.
Vol. III, Cited from Cincinnati Gr. Alex.
Co. p. 27, 340.

Leptaena ovata, Shumard.
Repts I+II, p. 110?, 154?, 205, 219.
Rept '73, p. 264

Leptaena n. sp.
Rept II, p. 219

Arthro Micheneri, Shumard.
Repts I+II, p. 110?, 154?, 205, 219.
Rept '73, p. 264.

Atrypa
Rept II, p. 154

Arthro, 2 or 3 sp.
Rept II, p. 219.

Platystrophia nervosa sp.
Rept '73, p. 264.

* *Strophostrophia subplanus*.
Vol. III, Dark gray limestone at
Thebes, Dec. p. 349.

* *Centronella Billingsiana*, M + W.
Vol. III, p. 352. This local bed of
gray limestone, Alex. Co. Dec.

* *Mentistella*
Vol. III, p. 354. Figured on plate C.
Not named.
Ornatopora, 2 or 3 sp.
Rept II, p. 219.

Stictopora. Rept '73, p. 264
Cladophora. Rept '73, p. 264
Oratopora. Rept '73, p. 264

Mo.

Cape Girardeau Limestone.

Cyphaeus Girardeanensis, Shumard
Repts I+II, p. 110, 154, 197, 219, Rept 73 p. 263
Vol. III. Shumard, Alex. Co. p. 27.
Euchinus deltoideus, Shumard.
Rept II, p. 154, 198, 219, Rept 73 p. 263

Acidaspis Halli, Shumard.
Rept I+II, p. 110, 154, 200, 219, Rept 73 p. 263
Praetio depressum, Shumard, Not de-
scribed,
Repts I+II, p. 110, 154, 219, Rept 73 p. 263

Chelonus
Rept II, p. 154, 219,

Asaphus
Repts I+II, p. 110. Can this have been the
hypostoma of a true trilobite. I found
in our Upper Silurian fauna. Said to
be associated in a fine slab with
Cyphaeus, Acidaspis + Praetio in a
slab. Also p. 219.

x Asaphus canalis, Canada
Vol. III. Shumard, Alex. Co. p. 27.
This species was described by Canada
from the Chazy of New York.

x Adiantum (Mack + Wright) D. Danae.
Vol. III, 98. 2 mi. above Datto. in
S. part of Upper Silurian.

Oratio depressum, Shumard, 1855=71
Wm. name. Cited from Cape Girardeau list.

Cypripedium Girardeaui Shumard
Cited from Upper Sil. = Cape Girardeau list.
2 mi. above Cape Girardeau.

Gypsochroma flumescens. Not determinable
1855. according to W. + Sp. Cited
from Cape Girardeau l. 1 mi. above Cape Girardeau.

Columaria inaequalis. Hall: 52
from California limestone. Cited
by Shumard '55 to '71 from N. Va.
area of Cape Girardeau l. 1 mi. above Cape Girardeau.

Tentaculites inermis. Shumard '55
Cited from Cape Girardeau l.
2 mi. above Cape Girardeau.
Tentaculites major. Shumard = Wm. name. in same locality.

Hemocrinus flexuosus, Shumard
'55 in same locality. Wm. name.
Cited from 2 mi. above Cape Girardeau.

Septalium aestivum Shumard '55
= *Septalium* acc. to Schuchert.
Cited from Cape Girardeau l.

Murchisonia major, Hall, Cited from
Balena limestone in Wisconsin, Rep. IV.
Receptaculites to *Orthis*. Hall, Cited as *Chonetes*
typical of the Galena l.
Macilinea magna, de Saur, is a *Chonetes*
species from New York. *Orthis* di-
scribed M. *concordia* + *anthropomorphica*
from the Galena of Wisconsin. Hall is given
a large figure in the *Chonetes* to the Hudson
River Group. N.Y.
Subulites elongatus is cited from the Oneida
l. = N.Y.

Strophomena lenticaulis is cited from
the *Orthis* to the Hudson River Gr.
Murchisonia gracilis Hall is cited from
the *Orthis* to the Hudson River Gr.
Murchisonia carinifera, Shumard,
Cited from the *Orthis* at Glenora.
St. Louis Gr. M.

1875. *Black & white* *Convolvulus*, *Itall.*

2. + Gold in 5 p. 2. 10. 11.

in Min. Mus. Babylon & Assyria

$$n + 8p - 4k$$

interior of the mountain in the center.

1870

1. The first part of the document is a list of names and titles, including "The Hon. Mr. Justice" and "The Hon. Mr. Justice".

1892

Grindam.

originally from the Gen. Held. at 1 mi.

harris sanding, Cape Girardeau Co.

Arctostaphylos (2 species) / *Arctostaphylos* (2 species)

at me Thelco. Alexander G. 2011.

Capla Gironda cu br.

? *Callispermum 2 annuifol.* *Reimer.* 1860.

in form. 1860. 1861. 1862. 1863. 1864. 1865. 1866. 1867. 1868. 1869. 1870. 1871. 1872. 1873. 1874. 1875. 1876. 1877. 1878. 1879. 1880. 1881. 1882. 1883. 1884. 1885. 1886. 1887. 1888. 1889. 1890. 1891. 1892. 1893. 1894. 1895. 1896. 1897. 1898. 1899. 1900. 1901. 1902. 1903. 1904. 1905. 1906. 1907. 1908. 1909. 1910. 1911. 1912. 1913. 1914. 1915. 1916. 1917. 1918. 1919. 1920. 1921. 1922. 1923. 1924. 1925. 1926. 1927. 1928. 1929. 1930. 1931. 1932. 1933. 1934. 1935. 1936. 1937. 1938. 1939. 1940. 1941. 1942. 1943. 1944. 1945. 1946. 1947. 1948. 1949. 1950. 1951. 1952. 1953. 1954. 1955. 1956. 1957. 1958. 1959. 1960. 1961. 1962. 1963. 1964. 1965. 1966. 1967. 1968. 1969. 1970. 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993. 1994. 1995. 1996. 1997. 1998. 1999. 2000. 2001. 2002. 2003. 2004. 2005. 2006. 2007. 2008. 2009. 2010. 2011. 2012. 2013. 2014. 2015. 2016. 2017. 2018. 2019. 2020. 2021. 2022. 2023. 2024. 2025. 2026. 2027. 2028. 2029. 2030. 2031. 2032. 2033. 2034. 2035. 2036. 2037. 2038. 2039. 2040. 2041. 2042. 2043. 2044. 2045. 2046. 2047. 2048. 2049. 2050. 2051. 2052. 2053. 2054. 2055. 2056. 2057. 2058. 2059. 2060. 2061. 2062. 2063. 2064. 2065. 2066. 2067. 2068. 2069. 2070. 2071. 2072. 2073. 2074. 2075. 2076. 2077. 2078. 2079. 2080. 2081. 2082. 2083. 2084. 2085. 2086. 2087. 2088. 2089. 2090. 2091. 2092. 2093. 2094. 2095. 2096. 2097. 2098. 2099. 2100. 2101. 2102. 2103. 2104. 2105. 2106. 2107. 2108. 2109. 2110. 2111. 2112. 2113. 2114. 2115. 2116. 2117. 2118. 2119. 2120. 2121. 2122. 2123. 2124. 2125. 2126. 2127. 2128. 2129. 2130. 2131. 2132. 2133. 2134. 2135. 2136. 2137. 2138. 2139. 2140. 2141. 2142. 2143. 2144. 2145. 2146. 2147. 2148. 2149. 2150. 2151. 2152. 2153. 2154. 2155. 2156. 2157. 2158. 2159. 2160. 2161. 2162. 2163. 2164. 2165. 2166. 2167. 2168. 2169. 2170. 2171. 2172. 2173. 2174. 2175. 2176. 2177. 2178. 2179. 2180. 2181. 2182. 2183. 2184. 2185. 2186. 2187. 2188. 2189. 2190. 2191. 2192. 2193. 2194. 2195. 2196. 2197. 2198. 2199. 2200. 2201. 2202. 2203. 2204. 2205. 2206. 2207. 2208. 2209. 2210. 2211. 2212. 2213. 2214. 2215. 2216. 2217. 2218. 2219. 2220. 2221. 2222. 2223. 2224. 2225. 2226. 2227. 2228. 2229. 2230. 2231. 2232. 2233. 2234. 2235. 2236. 2237. 2238. 2239. 2240. 2241. 2242. 2243. 2244. 2245. 2246. 2247. 2248. 2249. 2250. 2251. 2252. 2253. 2254. 2255. 2256. 2257. 2258. 2259. 2260. 2261. 2262. 2263. 2264. 2265. 2266. 2267. 2268. 2269. 2270. 2271. 2272. 2273. 2274. 2275. 2276. 2277. 2278. 2279. 2280. 2281. 2282. 2283. 2284. 2285. 2286. 2287. 2288. 2289. 2290. 2291. 2292. 2293. 2294. 2295. 2296. 2297. 2298. 2299. 2300. 2301. 2302. 2303. 2304. 2305. 2306. 2307. 2308. 2309. 2310. 2311. 2312. 2313. 2314. 2315. 2316. 2317. 2318. 2319. 2320. 2321. 2322. 2323. 2324. 2325. 2326. 2327. 2328. 2329. 2330. 2331. 2332. 2333. 2334. 2335. 2336. 2337. 2338. 2339. 2340. 2341. 2342. 2343. 2344. 2345. 2346. 2347. 2348. 2349. 2350. 2351. 2352. 2353. 2354. 2355. 2356. 2357. 2358. 2359. 2360. 2361. 2362. 2363. 2364. 2365. 2366. 2367. 2368. 2369. 2370. 2371. 2372. 2373. 2374. 2375. 2376. 2377. 2378. 2379. 2380. 2381. 2382. 2383. 2384. 2385. 2386. 2387. 2388. 2389. 2390. 2391. 2392. 2393. 2394. 2395. 2396. 2397. 2398. 2399. 2400. 2401. 2402. 2403. 2404. 2405. 2406. 2407. 2408. 2409. 2410. 2411. 2412. 2413. 2414. 2415. 2416. 2417. 2418. 2419. 2420. 2421. 2422. 2423. 2424. 2425. 2426. 2427. 2428. 2429. 2430. 2431. 2432. 2433. 2434. 2435. 2436. 2437. 2438. 2439. 2440. 2441. 2442. 2443. 2444. 2445. 2446. 2447. 2448. 2449. 2450. 2451. 2452. 2453. 2454. 2455. 2456. 2457. 2458. 2459. 2460. 2461. 2462. 2463. 2464. 2465. 2466. 2467. 2468. 2469. 2470. 2471. 2472. 2473. 2474. 2475. 2476. 2477. 2478. 2479. 2480. 2481. 2482. 2483. 2484. 2485. 2486. 2487. 2488. 2489. 2490. 2491. 2492. 2493. 2494. 2495. 2496. 2497. 2498. 2499. 2500. 2501. 2502. 2503. 2504. 2505. 2506. 2507. 2508. 2509. 2510. 2511. 2512. 2513. 2514. 2515. 2516. 2517. 2518. 2519. 2520. 2521. 2522. 2523. 2524. 2525. 2526. 2527. 2528. 2529. 2530. 2531. 2532. 2533. 2534. 2535. 2536. 2537. 2538. 2539. 2540. 2541

Ch. apollinaris, *U. rufus*,
M'istina. Decatur + Conn Co

1866. N. S. Doc. A Marine Corp. 1866.

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Let's turn to the next page.

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1871

Tenn.

? *Discimus tumescens*. Wether.
1890. Clifton. Wayne Co. Tenn. Nica-
gara G. Type in Ill. State Coll.
Springfield.
Samptersonium tumescens, Dec-
abr. 1860. Decatur + Wayne Co.
Miner. Min. Coal Co.
Melocnium acutellum. Hall.
Apparently also in Niagara G. q.
western Tenn. W. + Sp.
Melocnium ellatum. W. + Sp. n. sp.
Niagara G. N. of Niagara Falls
+ St. Paul. Type in Coll. of
W. + Sp. Regarded by Reineke
as identical with his *Gytisium*
Laurel. Sil. Fauna Tenn. 1860. p. 48.
Melocnium Reinekei. W. + Sp. n. sp.
= *Gytisium* Laurel of Reineke. Type
in W. + Sp. Coll. 1889.
Allochium typum. W. + Sp. Niagara G.
Wayne + Decatur Co. Types in
Wether Coll. Springfield. + in
W. + Sp. Coll.
Eucalyptus virginicus ventricosa. W. + Sp.
= *Euc. coccinea* Reineke. Type in
W. + Sp. Coll. 2. det. with + Sp.
Eucalyptus virginicus Lindall. W. + Sp. n. sp.
1892. = *Euc. Wetheri*. Wether.
Niagara G. Wayne Co. Tenn. Type
in Ill. State Coll.
Eucalyptus virginicus Wether. 1875. Niagara
W. + Wayne Co. Tenn. Type in
S. S. G. only Coll.

Discimus tumescens. Wether.
1890. Clifton. Wayne Co. Tenn. Nica-
gara G. Type in Ill. State Coll.
Springfield.
Samptersonium tumescens, Dec-
abr. 1860. Decatur + Wayne Co.
Miner. Min. Coal Co.
Melocnium acutellum. Hall.
Apparently also in Niagara G. q.
western Tenn. W. + Sp.
Melocnium ellatum. W. + Sp. n. sp.
Niagara G. N. of Niagara Falls
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W. + Sp. Regarded by Reineke
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in W. + Sp. Coll. 1889.
Allochium typum. W. + Sp. Niagara G.
Wayne + Decatur Co. Types in
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Eucalyptus virginicus ventricosa. W. + Sp.
= *Euc. coccinea* Reineke. Type in
W. + Sp. Coll. 2. det. with + Sp.
Eucalyptus virginicus Lindall. W. + Sp. n. sp.
1892. = *Euc. Wetheri*. Wether.
Niagara G. Wayne Co. Tenn. Type
in Ill. State Coll.
Eucalyptus virginicus Wether. 1875. Niagara
W. + Wayne Co. Tenn. Type in
S. S. G. only Coll.

Ms.

Otylocistrum splendens, S.A. Miller.
1883. *Antus* group. Cape Canadian
Mts, and Alexander Cr. 900. Cyl.
in S.A. Miller coll.
Elyptostomus Fomichelli, Miller. 1874.
Macon + Youngsville. Upper
part of Hudson River Gr. Cyprian
coll. of Mr. F.J. Fomichell. Cited
by Hays as from Hudson of Mr.
Hudson. *Elyptostomus*. Mr.
Elyptostomus *procelliformis*. Hall. Am.
Mus. Nat. Hist. Albany NY + Perry Co. Mr.
New York Vol III 304. Cyp. Vol III.

Ky.

Otylocistrum Halli. Lyon. Niagara
Group (?) *formosa*. Ky. Type lost.
But specimens in Boden Coll. at
New Providence. Ind. See W + Sp.
Macrotylocistrum Macki. Lyon. 1861.
Niagara Gr. Gathers in G. Ky. Type
in the app coll. in Boden's material

[illegible]

587

2x

